Date\_\_\_\_\_\_\_\_\_\_ Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

202 Midterm Proof Review

**CHAPTER TWO PROOFS**

1. Prove by algebraic proof: If , then x = 10

Statements Reasons



2. **Given:** 

**Prove:** 

**Statements Reasons**

3. Given: 

Prove: 

Statements Reasons



1. Given: 

Prove: 

Statements Reasons

1. Given: SO = PH

S

O

P

H

Prove: SP = OH

Statements Reasons



1. Given:

Prove:

Statements Reasons

**CHAPTER 3 PROOFS**

6. Given: || Statements Reasons

CD bisects ∠BCE

Prove: ∠1 ≅ ∠3

C

A

3

2

1

B

E

D

7. Given: UD || HS Statements Reasons

DH || US

Prove: ∠1 ≅ ∠3

4

3

2

1

S

U

D

H

8. Given: a || b; l || m Statements Reasons

Prove: ∠2 ≅∠12

b

a

l

m

12

11

10

9

8

7

6

5

4

3

2

1

9. Given: ∠3 and ∠8 are supplementary Statements Reasons

Prove: l || m

l

m

8

7

6

5

4

3

2

1

**CHAPTER 4 PROOFS**

10. Given: ∠1 ≅∠2, ∠5 ≅ ∠6

Prove: ΔWXY ≅ ΔWXZ

W

X

Y

Z

1

2

3

4

5

6

11. Given: m∠1= m∠2

B is the midpoint of 



Prove: ∠A ≅ ∠C

2

1

E

D

C

B

A

3

4

5

12. Given:; ;

Prove: AB ≅ FE

13**. Given:  bisects , **

4

3

2

1

T

S

P

O

**Prove: **

**Statements Reasons**



14. Given: ∠1 ≅ ∠2 ≅∠3, ≅ 

Prove: ∠4 ≅ ∠5

15. Given: ,

Prove: 

7

8

Statements Reasons



16. Given: , 

Prove: 

Statements Reasons

**Geometry 202 Review of Coordinate Proofs**

1. Using the figure below, if B is the midpoint of AC and E is the midpoint of DF, prove
   1. BE || CD ||AF;
   2. BE = ½ (CD + AF)

Given AC = DF find the remaining coordinates of points B and E.



B( , )

E( , )

a. BE || CD ||AF;

b. Prove BE = ½ (CD + AF)

1. Use coordinate geometry to prove that the medians of an **equilateral** triangle are congruent. (A median connects the vertex to the midpoint of the opposite side) Complete the given diagram to find missing
2. points.





J ( , )

K( , )

L( , )

Now prove :